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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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21005 7590 04/04/2007 HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			EXAMINER CHEN, QING	
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SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/692,006	Applicant(s) NOBLE ET AL.	
	Examiner Qing Chen	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20040503</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the initial Office action based on the application filed on October 23, 2003.
2. **Claims 1-15** are pending.

Oath/Declaration

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The subsequent copies of the oath/declaration do not correctly identify the citizenship of the third inventor.

Drawings

4. The drawings are objected to because "Tier 1" should read -- Tier I -- in Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets

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may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the Examiner, the Applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities: a period (.) should be added after the sentence on page 10, line 25.

Appropriate correction is required.

6. The use of trademarks, such as ORACLE, has been noted in this application. Trademarks should be capitalized wherever they appear (capitalize each letter OR accompany each trademark with an appropriate designation symbol, *e.g.*, TM or ®) and be accompanied by the generic terminology (use trademarks as adjectives modifying a descriptive noun, *e.g.*, "the JAVA programming language").

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Claim Objections

7. **Claims 1-15** are objected to because of the following informalities:

- **Claim 1** contains a typographical error: the article “A” should be added before the statutory category of invention (computer apparatus).
- **Claims 1, 3, and 4** recite the limitation “the conceptual data model.” Applicant is advised to change this limitation to read “the core conceptual data model” for the purpose of providing it with proper explicit antecedent basis.
- **Claims 2 and 5-7** depend on Claim 1 and, therefore, suffer the same deficiency as Claim 1.
- **Claims 1, 3, 8, 10, and 15** recite the limitation “given applications.” Applicant is advised to change this limitation to read “given software applications” for the purpose of providing it with proper explicit antecedent basis.
- **Claims 2 and 5-7** depend on Claim 1 and, therefore, suffer the same deficiency as Claim 1.
- **Claim 4** depends on Claim 3 and, therefore, suffers the same deficiency as Claim 3.
- **Claims 9 and 11-14** depend on Claim 8 and, therefore, suffer the same deficiency as Claim 8.
- **Claims 1, 4, 8, and 11** recite the limitation “given application.” Applicant is advised to change this limitation to read “given software application” for the purpose of providing it with proper explicit antecedent basis.
- **Claims 2, 3, and 5-7** depend on Claim 1 and, therefore, suffer the same deficiency as Claim 1.
- **Claims 9, 10, and 12-14** depend on Claim 8 and, therefore, suffer the same deficiency as Claim 8.

- **Claims 1 and 8** recite the limitation “the composite view.” Applicant is advised to change this limitation to read “the composite class view” for the purpose of providing it with proper explicit antecedent basis.
- **Claims 2-7** depend on Claim 1 and, therefore, suffer the same deficiency as Claim 1.
- **Claims 9-14** depend on Claim 8 and, therefore, suffer the same deficiency as Claim 8.
- **Claims 1, 8, and 11** recite the limitation “the application data model.” Applicant is advised to change this limitation to read “the respective data model” for the purpose of providing it with proper explicit antecedent basis.
- **Claims 2-7** depend on Claim 1 and, therefore, suffer the same deficiency as Claim 1.
- **Claims 9, 10, and 12-14** depend on Claim 8 and, therefore, suffer the same deficiency as Claim 8.
- **Claim 2** recites the limitation “conceptual data model.” Applicant is advised to change this limitation to read “core conceptual data model” for the purpose of providing it with proper explicit antecedent basis.
- **Claims 2-7** recite the statutory category of invention “Apparatus.” Applicant is advised to change this statutory category of invention to read “The computer apparatus” for the purpose of providing it with proper explicit antecedent basis.
- **Claims 9-14** contain a typographical error: the article used to designate the statutory category of invention (*i.e.*, method) should be changed from “A” to “The.”
- **Claim 15** recites the limitations “the respective application data model” and “the application class views.” Applicant is advised to change these limitations to read “the

respective data model” and “the class views,” respectively, for the purpose of providing them with proper explicit antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 1, 2-7, 10, and 12-14** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitations “the composite class views” and “the tiers results.” There are insufficient antecedent basis for these limitations in the claim. In the interest of compact prosecution, the Examiner subsequently interprets these limitations as reading “composite class views” and “tiers results,” respectively, for the purpose of further examination.

Claims 2-7 depend on Claim 1 and, therefore, suffer the same deficiency as Claim 1.

Claims 1 and 2 recite the limitation “the class views.” There is insufficient antecedent basis for this limitation in the claims. In the interest of compact prosecution, the Examiner

subsequently interprets this limitation as reading “class views” for the purpose of further examination.

Claims 3-7 depend on Claim 1 and, therefore, suffer the same deficiency as Claim 1.

Claims 3 and 10 recite the limitation “the attribute.” There is insufficient antecedent basis for this limitation in the claims. In the interest of compact prosecution, the Examiner subsequently interprets this limitation as reading “the attribute in the composite class view” for the purpose of further examination.

Claim 4 depends on Claim 3 and, therefore, suffers the same deficiency as Claim 3.

Claims 7 and 14 recite the limitation “XML.” There is insufficient antecedent basis for this limitation in the specification. In the interest of compact prosecution, the Examiner subsequently interprets this limitation as reading “XML (Extensible Markup Language)” for the purpose of further examination.

Claim 12 recites the limitation “the core model.” There is insufficient antecedent basis for this limitation in the claim. In the interest of compact prosecution, the Examiner subsequently interprets this limitation as reading “a core model” for the purpose of further examination.

Claims 13 and 14 depend on Claim 12 and, therefore, suffer the same deficiency as Claim 12.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. **Claims 1-15** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-7 are directed to computer apparatus. However, the recited components of the computer apparatus appear to lack the necessary physical components (hardware) to constitute a machine or manufacture under § 101. Therefore, these claim limitations can be reasonably interpreted as computer program modules—software *per se*. The claims are directed to computer apparatus of functional descriptive material *per se*, and hence non-statutory.

The claims constitute computer programs representing computer listings *per se*. Such descriptions or expressions of the programs are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element, which defines structural and functional

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interrelationships between the computer program and the rest of the computer, that permits the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

The result of **Claims 1-7** is directed to the act of "enabling," which does not appear to be a tangible result so as to constitute a practical application of the idea. The act of "enabling" is merely a thought or an abstract idea and does not appear to produce a tangible result even if the step of "enabling" does occur, since the result of that enablement is not conveyed in the real world. The result is an enablement, which is neither used in a disclosed practical application nor made available for use in a disclosed practical application. It also does not appear that the usefulness of the enablement can be realized from the claimed steps to support a disclosed specific, substantial, and credible utility so as to produce a useful result.

Therefore, the claims do not meet the statutory requirement of 35 U.S.C. § 101, since the claims are not directed to a practical application of the § 101 judicial exception producing a result tied to the physical world.

The result of **Claims 8-14** is directed to the act of "using," which does not appear to be a tangible result so as to constitute a practical application of the idea. The act of "using" is merely a thought or an abstract idea and does not appear to produce a tangible result even if the step of "using" does occur, since the result of that use is not conveyed in the real world.

Claims 8-14 are rejected for the same reasons set forth in the rejections of Claims 1-7.

Claim 15 recites computer usable medium as a claimed element. However, the limitation of “a set of computer program instructions embodied (emphasis added) on the computer usable medium” can be reasonably interpreted as the computer usable medium carrying or transmitting electrical signals, since the computer program instructions are not recorded on the computer usable medium, so as to permit the function of the descriptive material to be realized when executed.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism *per se*, and as such are non-statutory natural phenomena. *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-14 (1853). Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. **Claims 1-6, 8-13, and 15** are rejected under 35 U.S.C. 102(e) as being anticipated by **Little et al.** (US 7,047,518).

As per **Claim 1**, Little et al. disclose:

- given one or more software applications of interest and each given software application having a respective data model or data view, for each said given software application, a class view of the respective data model (*see Column 16: 65-67 through Column 17: 1-4, "Data entity groups represent the logical data model for the application. Each data entity group contains a set of relational table and relational view classes which represent RDBMS tables and views and any customized access definition."; Column 17: 15-24, "To accommodate customized data access, the programmer can create custom access classes 240, illustrated in FIG. 16. In step 306, the programmer creates the relational table classes and a class diagram to show the relationship between them. "*);
- a composite class view formed by a consolidation of class views (*see Column 17: 25-30, "Composite view class deals with multiple table operation. The "AddCourseAndStudent" class will add one entry in the Course and one in the Student table. We use dependency to represent the relationship between a composite view class and the relational table classes involved. "*); and
- a core conceptual data model having a plurality of routes between attributes in the composite class view and attributes in the core conceptual data model, wherein class views are effectively one tier, composite class views are effectively a second tier and the core conceptual data model is effectively a third tier, such that a multi-tier data model with links between corresponding attributes across tiers results, the multi-tier data model enabling management and sharing of engineering data of the given software applications with other process and plant

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engineering applications such that process engineering and plant operations are enhanced (*see Column 18: 5-25, "... a class diagram, a relational entity and an access class are created. The class diagram represents the actual pattern being applied to the relational entity." and "The class diagram show the relationship of the generated classes and the classes coming from the framework. In general, this is the pattern that we use to handle the RDBMS-Object mapping for The Expert System."*).

As per **Claim 2**, the rejection of **Claim 1** is incorporated; and Little et al. further disclose:

- an amalgamator for synthesizing class views, composite class views and core conceptual data model into a consolidated multi-tier data model (*see Column 19: 16-26, "The very last step in the process is code generation. This is done by invoking "M3 Builder=>Generate ..."."* and *"All implementation details such as physical source files, make files, libraries are populated in all corresponding model components."*).

As per **Claim 3**, the rejection of **Claim 1** is incorporated; and Little et al. further disclose:

- a mapper for linking the core conceptual data model attributes to the composite class view and the composite class view attributes to application class views, such that there is a one-to-one mapping between an attribute in the composite class view and a route in the core conceptual data model to corresponding given software applications from which the attribute in the composite class view originated (*see Column 18: 21-25, "Each generated M3 Builder data entity group contains a set of data entity packages which map to the relational table and relational view classes."*).

As per **Claim 4**, the rejection of **Claim 3** is incorporated; and Little et al. further disclose:

- wherein each class view is represented in terms from the respective given software application such that an end user of said given software application is able to access data from the core conceptual data model (*see Column 19: 37-49, "... the programmer can extend the generated code in several different ways to provide very powerful and robust data access handling: ... "*).

As per **Claim 5**, the rejection of **Claim 1** is incorporated; and Little et al. further disclose:

- wherein the class views, composite class views and conceptual data model are represented by object oriented programming elements (*see Column 9: 26-29, "Source Code Generation: The Expert System applies certain mapping algorithms in the transformation of Rose logical and component views to generated Java and C++ server source code. "*).

As per **Claim 6**, the rejection of **Claim 5** is incorporated; and Little et al. further disclose:

- wherein certain object oriented programming elements are defined by classes (*see Column 10: 18-23, "M3 Framework is a logical package in the logical view, which contains all of the classes in the M3 Framework. Data Entity Framework is a logical package in the logical view, which contains a set of base classes from which all data entity classes must subclass from. "*); and
- a class library editing subsystem for enabling user creation and editing of definitions of classes (*see Column 10: 55-57, "An Edit Implementation feature 176 uses the a notepad*

program or other text editor to open the files associated with the components selected in the component diagram.”).

As per **Claim 8**, Little et al. disclose:

- forming a multi-tier data model with links between corresponding attributes across tiers, a first tier being formed by:
 - for each of multiple given software applications of interest and having a respective data model, providing a practitioner's view of the given software application using a respective class view of the respective data model (*see Column 16: 65-67 through Column 17: 1-4, “Data entity groups represent the logical data model for the application. Each data entity group contains a set of relational table and relational view classes which represent RDBMS tables and views and any customized access definition.”; Column 17: 15-24, “To accommodate customized data access, the programmer can create custom access classes 240, illustrated in FIG. 16. In step 306, the programmer creates the relational table classes and a class diagram to show the relationship between them.”*);
 - a second tier being formed by consolidating class views into a composite class view (*see Column 17: 25-30, “Composite view class deals with multiple table operation. The “AddCourseAndStudent” class will add one entry in the Course and one in the Student table. We use dependency to represent the relationship between a composite view class and the relational table classes involved.”*); and
 - a third tier being formed by forming a conceptual data model having a plurality of routes between attributes in the composite class view and attributes in the conceptual data model

(see Column 18: 5-25, "... a class diagram, a relational entity and an access class are created. The class diagram represents the actual pattern being applied to the relational entity." and "The class diagram show the relationship of the generated classes and the classes coming from the framework. In general, this is the pattern that we use to handle the RDBMS-Object mapping for The Expert System."); and

- using the multi-tier data model, enabling sharing of engineering data of the given software applications with other process and plant engineering routines *(see Column 19: 27-29, "Once the modeling is done, the programmer would generate 256 (shown in FIG. 23) the data access code for the application.").*

As per **Claim 9**, the rejection of **Claim 8** is incorporated; and Little et al. further disclose:

- wherein the second tier is further formed by synthesizing the class views into the composite class view *(see Column 19: 16-26, "The very last step in the process is code generation. This is done by invoking "M3 Builder=>Generate ...". and "All implementation details such as physical source files, make files, libraries are populated in all corresponding model components.").*

As per **Claim 10**, the rejection of **Claim 8** is incorporated; and Little et al. further disclose:

- wherein the step of forming a multi-tier data model further includes producing a one-to-one mapping between an attribute in each application class view to the composite class view, and a one-to-one mapping between an attribute in the composite class view and a route in the

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conceptual data model to corresponding given software applications from which the attribute in the composite class view originated (*see Column 18: 21-25, "Each generated M3 Builder data entity group contains a set of data entity packages which map to the relational table and relational view classes."*).

As per **Claim 11**, the rejection of **Claim 8** is incorporated; and Little et al. further disclose:

- wherein the step of providing a practitioner's view includes in each class view, representing the respective data model in terms from the respective given software application (*see Column 16: 65-67 through Column 17: 1-4, "Data entity groups represent the logical data model for the application. Each data entity group contains a set of relational table and relational view classes which represent RDBMS tables and views and any customized access definition."*).

As per **Claim 12**, the rejection of **Claim 8** is incorporated; and Little et al. further disclose:

- representing at least one of the class views, the composite class view and a core model in terms of object oriented programming elements (*see Column 9: 26-29, "Source Code Generation: The Expert System applies certain mapping algorithms in the transformation of Rose logical and component views to generated Java and C++ server source code."*).

As per **Claim 13**, the rejection of **Claim 12** is incorporated; and Little et al. further disclose:

- wherein certain object oriented programming elements are defined by classes (*see Column 10: 18-23, "M3 Framework is a logical package in the logical view, which contains all of the classes in the M3 Framework. Data Entity Framework is a logical package in the logical view, which contains a set of base classes from which all data entity classes must subclass from."*); and
- enabling user creation and edition of definitions of classes (*see Column 10: 55-57, "An Edit Implementation feature 176 uses the a notepad program or other text editor to open the files associated with the components selected in the component diagram."*).

As per **Claim 15**, Little et al. disclose:

- a computer usable medium for managing engineering data (*see Column 33: 20, "A computer readable medium ..."*); and
- a set of computer program instructions embodied on the computer usable medium (*see Column 33: 20-22, "A computer readable medium, including instructions stored thereon ..."*), including instructions to:
 - provide a respective class view for each of plural given software applications of interest and having a respective data model, each class view being of the respective data model (*see Column 16: 65-67 through Column 17: 1-4, "Data entity groups represent the logical data model for the application. Each data entity group contains a set of relational table and relational view classes which represent RDBMS tables and views and any customized access definition."*; *Column 17: 15-24, "To accommodate customized data access, the programmer can create*

custom access classes 240, illustrated in FIG. 16. In step 306, the programmer creates the relational table classes and a class diagram to show the relationship between them.”);

- form a composite class view from the class views (see Column 17: 25-30, “Composite view class deals with multiple table operation. The “AddCourseAndStudent” class will add one entry in the Course and one in the Student table. We use dependency to represent the relationship between a composite view class and the relational table classes involved.”);
- form a conceptual model (see Column 18: 5-25, “... a class diagram, a relational entity and an access class are created. The class diagram represents the actual pattern being applied to the relational entity.” and “The class diagram show the relationship of the generated classes and the classes coming from the framework. In general, this is the pattern that we use to handle the RDBMS-Object mapping for The Expert System.”); and
- form a consolidated multi-tier data model from the class views, composite class view and the conceptual model such that sharing of engineering data of the given software applications is enabled (see Column 19: 16-26, “The very last step in the process is code generation. This is done by invoking “M3 Builder=>Generate ...”. ” and “All implementation details such as physical source files, make files, libraries are populated in all corresponding model components.”).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. **Claims 7 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Little et al.** (US 7,047,518).

As per **Claim 7**, the rejection of **Claim 6** is incorporated; however, Little et al. do not disclose:

- wherein the class library editing subsystem employs XML (Extensible Markup Language).

Official Notice is taken that it is old and well known within the computing art to utilize XML. XML is widely used to facilitate the sharing of data across different information systems, particularly systems connected via the Internet. Formally defined languages based on XML (such as RSS, MathML, GraphML, XHTML, Scalable Vector Graphics, MusicXML and thousands of other examples) allow diverse software to reliably understand information formatted and passed in these languages. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the class library editing subsystem employs XML (Extensible Markup Language). The modification would be obvious because one of

ordinary skill in the art would be motivated to exchange a wide variety of data on the Web and elsewhere.

As per **Claim 14**, the rejection of **Claim 13** is incorporated; however, Little et al. do not disclose:

- wherein the step of enabling user creation and edition includes employing XML (Extensible Markup Language) interfaces.

Official Notice is taken that it is old and well known within the computing art to utilize XML. XML is widely used to facilitate the sharing of data across different information systems, particularly systems connected via the Internet. Formally defined languages based on XML (such as RSS, MathML, GraphML, XHTML, Scalable Vector Graphics, MusicXML and thousands of other examples) allow diverse software to reliably understand information formatted and passed in these languages. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the step of enabling user creation and edition includes employing XML (Extensible Markup Language) interfaces. The modification would be obvious because one of ordinary skill in the art would be motivated to exchange a wide variety of data on the Web and elsewhere.

Conclusion


16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


WEI ZHEN
SUPERVISORY PATENT EXAMINER

QC / *QC*
March 26, 2007